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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/584,638	05/31/2000	Marcos N. Novaes	POU9-2000-0010-US1	4280

46369 7590 06/22/2005

HESLIN ROTHENBERG FARLEY & MESITI P.C.  
5 COLUMBIA CIRCLE  
ALBANY, NY 12203

EXAMINER

WON, MICHAEL YOUNG

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 06/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Supplemental Office Action Summary

Application No.

09/584,638

Applicant(s)

NOVAES ET AL.

Examiner

Michael Y. Won

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-72 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 8-11, 22, 30-33, 44, 56-59 and 70 is/are allowed.  
6) ☒ Claim(s) 1, 4-7, 12-21, 23-29, 34-43, 45-55, 60-69, 71 and 72 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. In view of the Appeal Brief filed on April 8, 2005, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

- 2. Claims 1 and 4-72 have been re-examined and remain pending with this action.
- 3. Claims 8-11, 22, 30-33, 44, 56-59 and 70 are allowable.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4-7, 12-21, 23-29, 34-43, 45-55, 60-69, and 71-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ballard (US 6,078,960) in view of Colby et al. (US 6,006,264 A).

**INDEPENDENT:**

As per **claims 1, 25, and 51**, Ballard teaches a method, a system, and at least one program storage device readable by a machine tangibly embodying at least one program of instructions executable by the machine to perform a method, of providing ordered lists of service addresses (see col.1, lines 46-49), comprising: creating an ordered list of service addresses to be used by a client node of a computing environment to reach a service of said computing environment (see Fig.4A; col.1, lines 46-50 & 59-63; and col.6, lines 5-8), said creating using a predefined equation to order a plurality of service addresses having the same ordering criterion, said predefined equation balancing use of said plurality of service addresses among said client node and at least one other client node of said computing environment (see col.5, lines 33-48: "connect time to a given computer relative to available connect time among all the computers whose load is being balanced"); and using said ordered list by said client node to reach said service (see col.1, lines 49-50 & 63-65 and col.5, line 67-col.6, line 2).

Although Ballard teaches of an ordered list of service addresses, Ballard does not explicitly teach wherein said list is ordered specifically for said client node based on one or more characteristics of said client node. Colby teaches wherein a list is ordered

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specifically for said client node based on one or more characteristics of said client node (see Fig.22; col.4, lines 52-53; col.7, lines 22-26 & 55-57; col.10, lines 40-50: “capabilities of the requesting client”; col.11, lines 8-18; col.12, line 51-col.13, line 2; col.13, lines 58-60: “proximity to the client making the content request”; and col.18, line 40-col.19, line 36).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Colby within the system of Ballard by implementing a list that is ordered specifically for said client node based on one or more characteristics of said client node within the method, system, and program of providing ordered list of service addresses because Colby teaches that “trans-continental network links introduce delay and are frequently congested” and his server selection process “avoids such trans-continental links and the bottlenecks they introduce” (see col.3, lines 60-65). Therefore by employing a list that is ordered with respect to the “proximity of the client” (see col.2, line 57) or “capabilities of the requesting client” (see col.10, lines 49-50), congestion or bottlenecks, which cause delay, are avoided.

As per **claims 18, 40, and 66**, Ballard teaches a method, a system, and at least one program storage device readable by a machine tangibly embodying at least one program of instructions executable by the machine to perform a method, of providing ordered lists of service addresses (see col.1, lines 46-49), comprising: ordering a list of a plurality of service addresses according to an ordering criterion (see Fig.4A; col.1, lines 46-50 & 59-63; col.5, lines 28-35; and col.6, lines 5-8); and for at least one set of service addresses of said plurality of service addresses having a same value for the

ordering criterion, selecting an order for the service addresses of the set, said selecting being based at least in part on workload distribution (see col.5, lines 33-48: "connect time to a given computer relative to available connect time among all the computers whose load is being balanced").

Although Ballard teaches of an ordered list of service addresses, Ballard does not explicitly teach wherein said list is ordered specifically for said client node based on one or more characteristics of said client node. Colby teaches wherein a list is ordered specifically for said client node based on one or more characteristics of said client node (see Fig.22; col.4, lines 52-53; col.7, lines 22-26 & 55-57; col.10, lines 40-50: "capabilities of the requesting client"; col.11, lines 8-18; col.12, line 51-col.13, line 2; col.13, lines 58-60: "proximity to the client making the content request"; and col.18, line 40-col.19, line 36).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Colby within the system of Ballard by implementing a list that is ordered specifically for said client node based on one or more characteristics of said client node within the method, system, and program of providing ordered list of service addresses because Colby teaches that "trans-continental network links introduce delay and are frequently congested" and his server selection process "avoids such trans-continental links and the bottlenecks they introduce" (see col.3, lines 60-65). Therefore by employing a list that is ordered with respect to the "proximity of the client" (see col.2, line 57) or "capabilities of the requesting client" (see col.10, lines 49-50), congestion or bottlenecks, which cause delay, are avoided.

As per **claim 47**, Ballard teaches a system of providing ordered lists of service addresses (see col.1, lines 46-49), said system comprising: at least one node of a computing environment to create an ordered list of service addresses to reach a service of said computing environment (see Fig.4A; col.1, lines 46-50 & 59-63; and col.6, lines 5-8), the creating using a predefined equation to order a plurality of service addresses having the same ordering criterion, said predefined equation balancing use of said plurality of service addresses among said node to use the ordered list and at least one other node of said computing environment (see col.5, lines 33-48: "connect time to a given computer relative to available connect time among all the computers whose load is being balanced").

Although Ballard teaches of an ordered list of service addresses, Ballard does not explicitly teach wherein said list takes into consideration one or more characteristics of said client node. Colby teaches wherein a list takes into consideration one or more characteristics of said client node (see Fig.22; col.4, lines 52-53; col.7, lines 22-26 & 55-57; col.10, lines 40-50: "capabilities of the requesting client"; col.11, lines 8-18; col.12, line 51-col.13, line 2; col.13, lines 58-60: "proximity to the client making the content request"; and col.18, line 40-col.19, line 36).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Colby within the system of Ballard by implementing a list that takes into consideration on one or more characteristics of said client node within the system of providing ordered list of service addresses because Colby teaches that "trans-continental network links introduce delay and are frequently

congested” and his server selection process “avoids such trans-continental links and the bottlenecks they introduce” (see col.3, lines 60-65). Therefore by employing a list that is ordered with respect to the “proximity of the client” (see col.2, line 57) or “capabilities of the requesting client” (see col.10, lines 49-50), congestion or bottlenecks, which cause delay, are avoided.

As per **claim 48**, Ballard teaches a system of providing ordered lists of service addresses (see col.1, lines 46-49), said system comprising: at least one node to order a list of a plurality of service addresses according to an ordering criterion (see Fig.4A; col.1, lines 46-50 & 59-63; and col.6, lines 5-8); and at least one node to select, for at least one set of service addresses of said plurality of service addresses having a same value for the ordering criterion, an order for the service addresses of the set, the selecting being based at least in part on workload distribution (see col.5, lines 33-48: “connect time to a given computer relative to available connect time among all the computers whose load is being balanced”).

Although Ballard teaches of an ordered list of service addresses, Ballard does not explicitly teach wherein said list is ordered specifically for said client node based on one or more characteristics of said client node. Colby teaches wherein a list is ordered specifically for said client node based on one or more characteristics of said client node (see Fig.22; col.4, lines 52-53; col.7, lines 22-26 & 55-57; col.10, lines 40-50: “capabilities of the requesting client”; col.11, lines 8-18; col.12, line 51-col.13, line 2; col.13, lines 58-60: “proximity to the client making the content request”; and col.18, line 40-col.19, line 36).



It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Colby within the system of Ballard by implementing a list that is ordered specifically for said client node based on one or more characteristics of said client node within system of providing ordered list of service addresses because Colby teaches that "trans-continental network links introduce delay and are frequently congested" and his server selection process "avoids such trans-continental links and the bottlenecks they introduce" (see col.3, lines 60-65). Therefore by employing a list that is ordered with respect to the "proximity of the client" (see col.2, line 57) or "capabilities of the requesting client" (see col.10, lines 49-50), congestion or bottlenecks, which cause delay, are avoided.

**DEPENDENT:**

As per **claims 4, 6, 7, 23, 24, 26, 28, 29, 45, 46, 52, 54, 55, 71 and 72**, Ballard does not explicitly teaches wherein said ordering criterion comprises lowest distance from said client node to a plurality of servers corresponding to said plurality of service addresses. Colby teaches of a criterion comprising lowest distance from said client node to a plurality of servers corresponding to said plurality of service addresses (see col.3, lines 15-18 and col.20, lines 27-33). See motivation above.

As per **claims 5, 27, and 53**, Ballard further teaches wherein said predefined equation is based at least in part on the number of said plurality of service addresses having the same ordering criterion and a node number of said client node (implicit: see col.5, lines 36-48).

As per **claims 12, 34, and 60**, Ballard further teaches wherein said service comprises a system registry service (inherent: see col.4, lines 44-49).

As per **claims 13, 17, 35, 39, 61, and 65**, Ballard further teaches wherein said creating and maintaining, is performed by a distributed configuration manager of said computing environment (implicit: see col.5, lines 53-56 and col.7, lines 7-9).

As per **claims 14, 36, and 62**, Ballard further teaches wherein-said distributed configuration manager provides said ordered list to one or more nodes of said computing environment (see col.7, lines 7-9).

As per **claims 15, 16, 37, 38, 63, and 64**, Ballard teaches of further comprising maintaining said ordered list comprising updating said ordered list in response to a change in the service addresses of said list (see col.6, lines 54-64).

As per **claims 19, 41, and 67**, Ballard further teach wherein said selecting comprises: indexing the service addresses of the set in a chosen order providing a set of indices corresponding to the service addresses of the set (see col.5, lines 33-48); and determining an order for the plurality of indices, said order to represent the order of the service addresses of the set (see Fig.4A; Fig.4B; and col.6, lines 5-8).

As per **claims 20, 42, and 68**, Ballard does not teaches wherein the chosen order is ascending order of service addresses. However these differences are only found in the nonfunctional descriptive material and are not functionally involved in the steps recited. The ordering of service addresses so that all the services that contain "common data" (see col.6, lines 14-16) are divided up into "percentage" and the "percentages" should add up to 100%" (see col.6, lines 8-12) would be performed the

same regardless whether the order was ascending and read from top-down or descending and read from bottom-up (see Fig.4B). Thus this ordering preference will not distinguish the claimed invention from prior art in terms of patentability, see *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowery*, 32F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to elect to prioritize ascending or descending so long as the functional objectives were met, because the subjective implementation does not patentably distinguish the claimed invention.

As per **claims 21, 43, and 69**, Ballard further teaches wherein said determining comprises using an equation to determine the order (see col.5, lines 33-35), said equation being based at least in part on the number of said service addresses (see col.6, lines 12-16) of said set and a node number of the specific client node (implicit: see col.5, lines 36-48).

As per **claims 49 and 50**, Ballard further teaches wherein said at least one node to order is same or different from said at least one node to select (see col.6, lines 8-11).

### ***Allowable Subject Matter***

5. As acknowledged in the Office action mailed September 8, 2003 and again reiterated below, claims 8-11, 22, 30-33, 44, 56-59, and 70 are allowed.

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As per claims 8, 30, and 56, prior art of record do not disclose, teach, or suggest the claim limitation of wherein said predefined equation comprises: 
$$(((a \text{ number of said node}) \bmod (\text{number of said plurality of service addresses-having the same ordering criterion}) + k) \bmod (\text{number of said plurality of service addresses having the same ordering criterion}))$$
, wherein mod is an integer remainder of a division operation, and k is set to a selected value.

Claims 9, 31, and 57 depend on claims 8, 30, and 56, respectively, and therefore are also allowable.

Claims 10, 32, and 58 depend on claims 8, 30, and 56, respectively, and therefore are also allowable.

Claims 11, 33, and 59 depend on claims 10, 32, and 58, which depend on claims 8, 30, and 56 respectively, and therefore are also allowable.

As per claims 22, 44, and 70, prior art of record do not disclose, teach, or suggest the claim limitation of wherein said equation comprises: 
$$(((\text{node number}) \bmod (\text{number of said service addresses of the set}) + k) \bmod (\text{number of said service addresses of the set}))$$
, wherein mod is an integer remainder of a division operation, and k is set to a selected value.

***Response to Arguments***

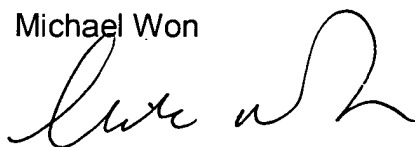
6. Argument(s) with respect to the references in the prior office action, Christensen et al. (US 6,330,605 B1) and Freund (US 5,987,611 A), have been considered but are moot in view of the new ground(s) of rejection.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Y. Won whose telephone number is 571-272-3993. The examiner can normally be reached on M-Th: 7AM-5PM.

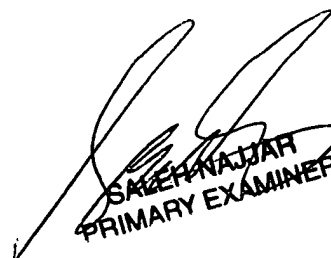
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Won



June 16, 2005



SALEH NAJJAR  
PRIMARY EXAMINER